ROHAN SHAH

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EDUCATION

University of California - San Diego **September 2025 - June 2030**
PhD, Mechanical Engineering

University of California - San Diego **September 2021 - June 2025**
Bachelor's, Mechanical Engineering - Controls and Robotics *GPA: 3.93*

WORK EXPERIENCE

Atutu **San Francisco, CA, USA**
Hardware and Controls Engineer *May 2025 - Present*
- Developed and raised funding for a low cost energy monitoring system for microgrids in developing countries like Myanmar.
- Used Simulink and RSCAD to simulate load profiles and develop load shedding and weather forecasting algorithms.

University of California San Diego **San Diego, CA, USA**
Undergraduate Instructional Assistant/COSMOS Cluster Assistant *April 2025 - Present*
- Assisted in teaching MAE 30B - Dynamics and Vibrations and the COSMOS Research Program at UC San Diego.
- Responsible for organizing and grading assignments of over 100 students, and instructed students on robotics topics, including Raspberry Pi programming, OpenCV applications, and FSM principles.

Hi Tech Honeycomb **San Diego, CA, USA**
Engineering Intern *February 2025 - June 2025*
- Developed and tested an autonomous solution to the Resistance Welding process, saving Hi Tech Honeycomb $40,000 annually.
- Manufactured low cost copper tools to ensure scalability of the industrial grade "Welding Table".

PROJECTS & OUTSIDE EXPERIENCE

Laser Control System **San Diego, CA, USA**
Undergraduate Researcher *November 2024 - Present*
- Set up a laser system to observe the different wavelengths emitted by various materials under a 1064 nm Surelite laser.
- Working on an image processing based control system to adjust the laser power based on the wavelengths being emitted.
- This work was undertaken to aid in the laser boring of the fusion targets during their fueling process.

Friction Carousel **San Diego, CA, USA**
Undergraduate Researcher *July 2023 - December 2024*
- Worked on an independent project in the Contextual Robotics Institute, to experiment the frictional properties of rolling motion.
- Designed and fabricated a ten-wheeled carousel system, complete with automated velocity, and force sensing capabilities.
- Quantified multi-contact friction's near-viscous relationship. Research featured on UCSD Undergraduate Research Hub; presented at 2024 APS March Meeting. Paper published in PNAS: https://www.pnas.org/doi/10.1073/pnas.2501169122.

Delayed Stretch Activation Wings **San Diego, CA, USA**
Undergraduate Researcher *August 2024 - October 2024*
- Collaborated with Georgia Tech's Agile Systems Lab to study the physics behind Delayed Stretch Activation.
- Integrated a Simulink model with a feedback control system to perform tests for verifying the DSA model; presented at SMASIS.

ORGANIZATIONS

American Society of Mechanical Engineers at UC San Diego
January 2024 - June 2025 | ***Chair***
Founded the student section in the capacity of Chair of the organization, expanding ASME student membership to 50+ participants. Interfaced NIWC, Solar Turbines, and several other organizations for events.

SKILLS

Python, Arduino, SolidWorks, AutoCAD, Fluid Mechanics, MATLAB, ANSYS, C++, Control Systems, Simulink, CNC and Manual Machining, Resistance Welding, Laser Operation Techniques